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Examination of the seeds and the oil of *Rosa canina* L.
V. A. Rush and G. A. Ivanova. *Compt. rend. acad. sci.*
U. R. S. S. 26, 259-61 (1940) (in German).—The seeds of
Rosa canina L., a by-product in the manuf. of vitamin C,
were found to have the following chem. compn. (in per-
centage of dry substance, the H₂O content of the sample
being 7.84%); fat 9.44, ash 1.94, N 1.45, carbohydrates
15.05, the latter being subdivided as follows: glucose 1.96,
sucrose 1.04, maltose 0.70, starch 0.0, hemicellulose 8.15,
cellulose 32.23. The amt. of essential oil obtained was
only 0.2-0.3%. The fatty oil, extd. with sulfur ether, has
the following characteristics: n_D²⁰ 1.4792; d₄²⁰ 0.9290;
viscosity (Ostwald) at 20° 51.68; acid no. 2.84 mg. KOH/
sapon. no. 191.5; I no. (Hubl-Waller) 154.9; thiocyanogen
no. 94.9; Reichert-Meisrl no. 1.43; Polenske no. 0.40; un-
saponifiables 1.65%; m. p. of the solid fat acids 9.45;
solid fat acids (Twitchell) 4.82%; I no. of the solid fat
acids 1.12%. It is of a yellow-orange color with a va-
nilla-like scent and sol. in the conventional fat solvents.
A. H. Kruppe

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Hydrogenation of vegetable oils. V. A. Rush, I. L. Dvinyanskova and E. I. Lyubarskii. *J. Applied Chem.* (U. S. S. R.) 10, 702-8 (in French 708) (1937).—Sundowner seed oil (150 g.) was hydrogenated in the presence of a catalyst (prepd. by the reduction of Ni formate) contg. 45.5% Ni, in the Lyubarskii autoclave (described), with PrOH (24 g.) as a H donor, at 200° , for 15 min. The product contained satd. compds. 12.5–12.8, oleic acid 80.4–84.5, isoleic acid 33.1–27.4 and linoleic acid 3.6–5.3%. To prevent an excessive destruction (35.7%) of the aldehyde formed from PrOH , the hydrogenation may be carried out in the presence of a Ni-kieselguhr catalyst. Under these conditions, only 10.8% of the aldehyde is destroyed, and the compn. of the product is satd. compds. 12.8–14.8, oleic acid 83.2–86.3, isoleic acid 22.0–26.8 and linoleic acid 4.7–10.3%. Thirteen references. A. A. Pudgorny

ASAC 51.4 METALLURGICAL LITERATURE CLASSIFICATION

PROCESSES AND PROPERTIES																									
GA Electrometric determination of the titrated acidity in dark-colored liquids. V. A. Bush and S. S. Aksarina. <i>Voprosy Pitaniya</i> 1938, No. 4, 5, 104-72; <i>Khim. Referat. Zhur.</i> 2, No. 4, 84-6(1939).—The electrometric method of titration (with quinhydrone) is recommended for detn. of the acidity of food products. Results of expts. for the detn. of the titrated acidity of saucers, tomatoes, jams and berry preserves are given. W. R. Henn																									
ASB SLA METALLOGICAL LITERATURE CLASSIFICATION																									

Hydrogenation of vegetable oils II. Conjugated hydrogenation of soybean oil with propyl alcohol. (V. A. Rush and I. L. Ivininannova. *J. Applied Chem.* (U. S. S. R.) 12, 428 (1939) French, 431(1939); cf. Rush, *et al.*, *C. I. 31*, 610F. Soybean oil conte. oleic 21, linoleic 33.2 and stearic acids 8.7%. was hydrogenated in the presence of Ni catalysts (Normann's) and PrOH (11 donors) by the method previously described. The product contained oleic 74.5, isoleic 4.8, stearic 11.3 and linoleic acids 9.6%, which is nearly the same as that of olive oil, the presence of iso acids in the product being the only difference. The yield of aldehyde formed from PrOH was 21.2% (theory); 17.3% (theory) of aldehyde was decomposed to $C_{17}H_{32}$ and CO and the rest was not accounted for; probably, it reacted with alc. forming acetal or was condensed with $C_{17}H_{32}$. III. Conjugated hydrogenation of oils with various degrees of unsaturation. *Ibid.* 431-6 (in French, 439). Olive, sunflower, linseed and soybean oils, refined with $NaOH$ (20% $\overline{B}$) to acid no. 0.5-0.1 mg. and washed until no trace of soap was present, were hydrogenated in the presence of 24 g. of PrOH per 120 g. of oil and 1% Ni catalyst (Normann's) at 290° for 15 min. The hydrogenation proceeded selectively and terminated at the point when practically all linoleic acid was transformed into oleic acid, except with linseed oil. The solidification of oil was caused by the isomerization of oleic acid, forming elaidic acid. Twenty references. A. A. Podgorov

A. A. Podgorniy

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Hydrogenation of vegetable oils. IV. Conjugated hydrogenation of sunflower oil with alcohols. V. A. Rush and I. L. Dymyannova. *J. Applied Chem.* (U.S.S.R.) 12, 1069-63 (in French, 1964) (1969); *U.S.S.R.* 33, 6629-9.

Sunflower oil contg. oleic acid 30.3, linoleic acid 61.4 and satd. acids 8.6% was hydrogenated in the presence of Ni catalyst ("Stecol") by means of MeOH, EtOH, PrOH, iso-BuOH and iso-AmOH. The products contained, resp., oleic acid 57.6, 51.4, 54.6, 56.6 and 53.6; isoleic acid 20.4, 26.6, 26.8, 16.6 and 26.4; satd. acids 19.6, 14.8, 13.4, 12.7 and 12.9; and linoleic acids 11.4, 7.2, 5.2, 14.1 and 7.1%. Thus the products approximated olive oil in compn. The yields of aldehydes formed from the respective alcs. were 16.7, —, 23.0, 33.9 and 60.2%; 5.1, —, 13.7, 3.6 and 10.9% of the aldehydes, resp., were decompd. and the rest was not accounted for. The hydrogenation of oil in the presence of iso-PrOH yielded a product contg. satd. acid 11.1, oleic acid 60.5, isoleic acid 16.5 and linoleic acid 11.9%. In this case the yield of acetone was 72.6%, the decompn. of acetone amounted to 0.9% and the rest was unaccounted for. A. A. Podgorny

AS 51.4 METALLURGICAL LITERATURE CLASSIFICATION

ROMASHOV, F.N.; ABRAMISHVILI, G.G.; RUSHANOV, I.I.

Diagnosis and surgical treatment of atresia of the tricuspid valve.
Kardiologiya 5 no.2:80-82 Mr-Apr '65. (MIRA 18:7)

1. Otdeleniye vrozhdennykh porokov serdtsa (zav. - doktor med. nauk V.I.Burakovskiy) i otdeleniye rentgenologii (zav. - doktor med. nauk M.A.Ivanitskaya) Instituta serdechno-sosudistoy khirurgii (direktor - prof. S.A.Kolesnikov; nauchnyy rukovoditel' - akademik A.N.Bakulev) AMN SSSR, Moskva.

VASIL'YEV, V.A.; RUSHANOV, I.I.; ZOLOTAREVSKAYA, L.A.

Immediate and late results of subtotal pericardiectomy in chronic constrictive pericarditis. Vest. khir. 92 no.3:19-26 Mr '64.

(MIRA 17:12)

1. Iz otdeleniya priobretennykh porokov (zav. prof. S.A.Kolesnikov), rentgenologicheskogo otdeleniya (zav. - doktor med. nauk M.A.Ivanitskaya) i laboratorii funktsional'noy diagnostiki (zav. - kand.med.nauk G.G.Gel'shteyn) Instituta serdechno-sosudistoy khirurgii (dir. - prof. S.A.Kolesnikov, nauchnyy rukovoditel' - akademik A.N.Bakulev) AMN SSSR. Adres avtorov: Moskva, Leninskiy prospekt, 8, Institut serdechno-sosudistoy khirurgii.

BEREZOV, Yu.Ye., prof.; POTEKINA, Ye.V.; RUSHANOV, I.I.

Significance of angiography during operation in the evaluation of indications for surgical treatment of vascular diseases. Vest. khir. no.7:8-15 J1 '64. (MIRA 18:4)

1. Iz otdeleniya khirurgii sosudov (zav. - prof. Yu.Ye. Berezov) i rentgenologicheskogo otdeleniya (zav. - doktor med. nauk M.A. Ivanitskaya) Instituta serdechno-sosudistoy khirurgii (dir. - prof. S.A. Kolesnikov, nauchnyy rukovoditel' - akademik A.N. Bakulev) AMN SSSR.

POKROVSKIY, A.V.; PETROSYAN, Yu.S.; MEL'NIK, I.Z.; RUSHANOV, I.I.

Angiographic picture of coarctation of the aorta according to operative data. Grud. khir. 5 no. 6:56-61 N-D '63 (MIRA 17:2)

1. Iz otdeleniya khirurgii sosudov (zav. - prof. Yu.Ye.Berezov) i rentgenologicheskogo otdeleniya (zav. - dotsent M.A. Ivanitskaya) Instituta serdechno-sosudistoy khirurgii (direktor- prof. S.A. Kolesnikov, nauchnyy rukovoditel'- akademik A.N.Bakulev) AMN SSSR.

IVANITSKAYA, M.A.; RUSHANOV, I.I.

Changes in the heart volume in mitral stenosis under the
influence of mitral commissurotomy; X-ray examination. Terap.
arkh. no.6:87-92 '62. (MIRA 15:9)

1. Iz rentgenologicheskogo otdeleniya (zav. - dotsent M.A.
Ivanitskaya) Instituta serdechno-sosudistoy khirurgii (dir. -
prof. S.A. Kolesnikov) AMN SSSR.
(MITRAL VALVE—SURGERY) (HEART—RADIOGRAPHY)

BEREZOV, Yu.Ye., doktor med.nauk; POKROVSKIY, A.V., kand.med.nauk;
MEL'NIK, I.Z.; RUSHANOV, I.I.; KHOMUTOVA, M.G.

Diagnosis of congenital stenosis of the aorta. Sov.med. 26
no.10:27-33 O '62. (MIRA 15:12)

1. Iz otdeleniya khirurgii sosudov (zav. - doktor med.nauk
Yu.Ye.Berezov) i rentgenologicheskogo otdeleniya (zav. - dotsent
M.A.Ivanitskaya) Instituta serdechno-sosudistoy khirurgii (dir. -
prof. S.A.Kolesnikov; nauchnyy rukovoditel' - akademik A.N.
Bakulev) AMN SSSR.

(AORTA—DISEASES)

RUSHANOV, I.V. dotsent

Development history of the Ekibastuz coal basin. Trudy Mosk. inst.
tonk. khim. tekhn. no.1:20-63 '62. (MIRA 17:4)

L 8477-66 EWT(1)/EWT(m)/ETC/EPF(n)-2/EWG(m)/T IJP(c) WW/AT.

ACC NR: AP5021914

SOURCE CODE: UR/0207/65/000/004/0149/0153

AUTHOR: Rushaylo, A. M. (Moscow)

ORG: none

TITLE: Measurement of heat flow and electrode temperature estimates in a pulsed electromagnetic plasma accelerator

SOURCE: Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, no. 4, 1965, 149-153

TOPIC TAGS: plasma accelerator, plasma radiation, electromagnetic field, heat transfer

ABSTRACT: Heat flow to the accelerating copper electrodes during one discharge of a plasma gun is measured. The accelerator used for the tests is shown schematically. It is powered by 1480 μ f bank of capacitors charged up to 5 kv. The initial pressure used is in the 10^{-4} mm Hg range. High electromagnetic fields permitted only calorimeters to be used which provided time-averaged results for the electrode material. A calorimetric radiometer with a quartz window was used for radiant energy flux. The results presented graphically show that the heat transfer to the electrodes decreased in the direction of plasma flow and again increased at the end. The energy partition between the electrodes shows uneven distribution (9% and 20% of the stored energy for 6.66 kJ discharges appeared on each of the electrodes.) A much smaller amount of

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ACC NR: AP5021914

energy was radiated away. The test results give a temperature estimate at the electrodes using the non-stationary heat transfer equation for a semi-infinite slab. More powerful discharges give higher wall temperatures than the melting temperature of copper. This is consistent with the observed melting of the electrode material. Orig. art. has: 4 figures, 12 formulas.

SUB CODE: 20/

SUBM DATE: 29Mar65/

ORIG REF: 005/

OTH REF: 001

BVK
Card 2/2

RUSHAYLO, A.M.

Experimental investigation of the entry of a body into water. Usp.
nauch.fot. 6:207-210 '59. (MIRA 13:6)

(Hydromechanics)

(Motion pictures--Scientific applications)

USSR/Human and Animal Physiology. Nervous System.
Higher Nervous System. Behavior.

T

Abstr Jour: Ref Zhur-Biol., No 20, 1958, 93644.

Author : Antal, Yu., Rushchak, M.

Inst :

Title : Conditioned Reflex Changes in the Lactic Acid Blood Level
of Dogs.

Orig Pub: Fiziol. zh. SSSR, 1957, 43, No 10, 941-948.

Abstract: Dogs after a "simulated run" manifested conditioned reflex rise in the lactic acid blood level. The rise was not great but statistically authenticated. A drop in the plasma alkali reserve was simultaneously demonstrated. It is assumed that the conditioned stimulus through its temporary relation with the

Card : 1/2

RUSHCHAK, M. [Ruscak, M.]; MATSEYOVA, Ye. [Macejova, E.]; RUSHCHAKOVA, D.
[Ruscakova, D.]; MRENA, E.

Glycolysis in the mitochondrial fraction of the central nervous
system in rats. Ukr. biokhim. zhur. 36 no. 4:584-592 '64.

(MIRA 18:12)

1. Institut eksperimental'noy meditsiny Slovatskoy akademii
nauk i Institut virusologii ~~C~~ekhoslovatskoy akademii nauk,
Bratislava. Submitted April 20, 1964.

RUSHCHAK, M. [Ruscak, M.]; MATSEYOVA, Ye. [Macejova, E.]; RUSHCHAKOVA, D.
[Ruscakova, D.]; MRENA, E.

Glycolysis in the mitochondrial fraction of the central nervous
system in rats. Ukr. biokhim. zhur. 36 no. 4:584-592 '64.
(MIRA 18:12)

1. Institut eksperimental'noy meditsiny Slovatskoy akademii
nauk i Institut virusologii ~~Che~~khoslovatskoy akademii nauk,
Bratislava. Submitted April 20, 1964.

ALEKHIN, F.K.; ALOTIN, L.M.; ALTAYEV, Sh.A.; ANTONOV, P.Ye.;
BEVZIK, Yu.Ya.; BELEN'KIY, D.M.; BRATCHENKO, B.F.,
gornyy inzh.; BRENNER, V.A.; BYR K., 7.F.; VAL'SHTEYN,
G.I.; YERMOLENOK, N.S.; ZHISLIN, I.M.; IVANOV, V.A.;
IVANCHENKO, G.Ye.; KVON, S.S.; KODYK, G.T.; KREMENCHUTSKIY,
N.F.; KURDYAYEV, B.S.; KUSHCHANOV, G.K.; MASTER, A.Z.;
PREOBRAZHENSKAYA, Ye.I.; ROZENTAL', Yu.M.; RUDOY, I.L.;
RUSHCHIN, A.A.; RYBAKOV, I.P.; SAGINOV, A.S.; SAMSONOV,
M.T.; SERGAZIN, F.S.; SKLEPCHUK, V.M.; USTINOV, A.M.;
UTTS, V.N.; FEDOTOV, I.P.; KHRAPKOV, G.Ye.; SHILENKOV, V.N.;
SHNAYDMAN, M.I.; BOYKO, A.A., retsenzent; SUROVA, V.A.,
ved. red.

[Mining of coal deposits in Kazakhstan] Razrabotka ugol'-
nykh mestorozhdenii Kazakhstana. Moskva, Nedra, 1965. 292 p.
(MIRA 18:5)

YAKUBOVSKIY, S. [Jakubowski, S.], doktor med.; RUSHCHIN'SKAYA, Ya.
[Ruszczyńska, J.]

Treatment of grave deformations in polyarthrititis. Ortop.,
travm. i protez. 26 no. 10:24-27 O '65. (MIRA 18:12)

1. Iz ortopedicheskogo otdeleniya (zav. - S. Yakubovskiy)
Revmatologicheskogo instituta (dir. - doktor med. V. Bryul'),
Varshava. Adres avtora: Varshava, Spartanskaya ul. dom 1.
Revmatologicheskiiy institut. Submitted July 9, 1965.

1ST AND 2ND SECTIONS		PROCEDURES AND PROPERTIES INDEX		3RD AND 4TH SECTIONS	
BC B-25 Polymerized vinyl acetate and polyvinyl alcohol. A. L. ROSENBERG (J. Appl. Chem., Russia, 1932, 5, 470-480). Chlorinated polyacrylates (composition discussed), useful in lacquer manufacture, are obtained by heating vinyl acetate in closed vessels in presence of K_2O or light petroleum. On saponification they yield polyvinyl alcohol. Ch. Ann.					
A10-15A METALLURGICAL LITERATURE CLASSIFICATION					
RESEARCH DIVISION		RESEARCH DIVISION		RESEARCH DIVISION	
SUBDIVISION		SUBDIVISION		SUBDIVISION	
SECTION		SECTION		SECTION	

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1ST AND 2ND ORDERS													PROCESSING AND PROPERTY INDEX													3RD AND 4TH ORDERS									
CA 4,5-Dichlorophthalic acid. A. L. Rushchinskii. Russ. 41,515, Feb. 24, 1935. Na phthalate is chlorinated in aq. soln. in the presence of compds. of Sb as catalyst.																																			
ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION																																			

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Polymerized vinyl acetate and polyvinyl alcohol. A. L. RUSHCHINSKII /
Applied Chem (U. S. S. R.) 3, 470-NR (1962).—Cohesive polymers are obtained by
heating vinyl acetate in closed vessels in the presence of Et₂O or pet. ether. These
polymers are valuable in mfg. lacquers. Sapon. of these polymers yields polyvinyl alc.
Proposed formulas for the polymerized products are discussed and new formulas ad-
vanced.
V. KALICHEVSKY

10

CH

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

10

Aromatic phosphates. I. F. Fokin and A. L. Rushchitskii - Russ. 21, 135, July 31, 1931. Classen C1 is passed through molten yellow P covered with molten phenol or its homolog and the product is treated with H₂O.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

STONY DIVISION

SECOND DIVISION

THIRD DIVISION

FOURTH DIVISION

FIFTH DIVISION

SIXTH DIVISION

SEVENTH DIVISION

EIGHTH DIVISION

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Three hundred and fifty-fifth Division

Three hundred and fifty-sixth Division

Three hundred and fifty-seventh Division

Three hundred and fifty-eighth Division

Three hundred and fifty-ninth Division

Three hundred and sixtieth Division

Three hundred and sixty-first Division

Three hundred and sixty-second Division

Three hundred and sixty-third Division

Three hundred and sixty-fourth Division

Three hundred and sixty-fifth Division

Three hundred and sixty-six

1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
PROCESSES AND PROPERTIES INDEX																			
CA Possibilities of obtaining by synthesis valuable aromatic aldehydes from new sources. A. L. Kuznetsovskii. <i>Compt. rend. acad. sci. (U. R. S. S.)</i> 1933; 118-21 (in English 121-3).--R. suggests the prepn. of such aldehydes as vanillin, burbonal and heliotropin from certain C-contg. raw materials. The CHO group might be introduced into the substituted or non-substituted benzene ring by means of mesoxalic ester (II). Since I is not readily available, this method would not be practicable commercially unless I were obtained from malonic ester, which in turn was made from C_2O_3. If elec. current is cheap, C_2O_3 may become a com. product and a valuable source of org. raw materials. Another possible starting point is $C_2H_4(CO)_2O$, which, after conversion into di-OH derivs. of $C_2H_4(CO)_2O$, might subsequently furnish the aldehydes desired. L. Kelley																			
ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION																			

Possibilities of obtaining by synthesis valuable aromatic aldehydes from new sources. A. I. Nishchikhin, *Comp. rend. acad. sci. (U. R. S. S. R.)* 1933, 117-121 (in English 121-3).—R. suggests the prepn. of such aldehydes as vanillin, burbonal and heliotropin from certain C-orig. raw materials. The CHO group might be introduced into the substituted or non-substituted benzene ring by means of mesomalic ester (II). Since I is not readily available, this method would not be practicable commercially unless I were obtained from malonic ester, which in turn was made from CaO_2 . If elec. current is cheap, CaO may become a con. product and a valuable source of org. raw materials. Another possible starting point is C_6H_6 , which, after conversion into di-OR derivs. of $\text{Ca}(\text{C}_6\text{H}_4\text{OR})_2$, might subsequently furnish the aldehydes desired. L. Kelley

TOMAS, O.; RUSHCHINSKIY, L.

Consolidate the planning departments, improve the planning. Mor.
flot. 24 no.8:11 Ag '64. (MIRA 18:9)

1. Nachal'nik Odesskogo porta (for Tomas). 2. Nachal'nik planovogo
otdela Odesskogo porta (for Rushchinskiy).

RUSHCHINSKIY, L.

Method and practice of cost accounting for the loading and
unloading of individual types of cargo. Mor.flot 22 no.12:
16-18 D '62. (MIRA 15:12)

1. Nachal'nik planovogo otdela Odesskogo porta.
(Merchant marine--Cost of operation)
(Cargo handling--Costs)

RUSHCHINSKIY, L.

Concerning the article "Improve indices of the harbor cargo handling operations plan." Mor. flot 22 no.7:6 J1 '62. (MIRA 15:7)

1. Nachal'nik planovogo otdela Odesskogo porta.
(Cargo handling—Costs)

KVASNIKOV, V.F., otv. red.; RUSHCHINSKIY, M.V., otv. red.; KOROLEVA,
T.I., red. izd-va; IL'INSKAYA, G.M., tekhn. red.

[Research on rock pressure] Issledovaniia gornogo davleniia.
Moskva, Gos.nauchno-tekhn. izd-vo lit-ry po gornomu delu, 1960.
446 p. (MIRA 14:5)

1. Akademiya nauk SSSR. Institut gornogo dela.
(Rock pressure)

SHEVYAKOV, L.D., akademik, otv. red.[deceased]; MAN'KOVSKIY, G.I., red.; AFENDIKOV, N.N., kand. tekhn. nauk, red.; YERSHOV, N.N., kand. tekhn. nauk, red.; LIBERMAN, Yu.M., red.; PANOV, A.D., red.[deceased]; RUSHCHINSKIY, M.V., red.; KRASOVSKIY, I.P., red.izd-va; PROZOROVSKAYA, V.L., tekhn. red.; LOMILINA, L.N., tekhn. red.

[Rock pressure and the lining of vertical shafts] Gornoe davlenie i krep' vertikal'nykh stvolov. Pod red. L.D. Sheviakova. Moskva, Gosgortekhnizdat, 1963. 211 p.

(MIRA 16:11)

1. Moscow. Institut gornogo dela imeni A.A.Skochinskogo.
(Rock pressure) (Shaft sinking)

BARANOVSKIY, V.I.; BROMNIKOV, D.M.; KORSHUNOV, S.I.; KULIKOV, A.P.; PARUSIMOV, V.F.; ROZENTRETER, B.A.; RUSHCHINSKIY, M.V.; SUDOPLATOV, A.P.; TERPOGOSOV, Z.A.; SHEVYAKOV, L.D., akademik, otv.red.; GUS'KOVA, O.M., tekhn.red.

[Terminology connected with underground mining systems in solid mineral deposits] Terminologiya sistem razrabotki mestorozhdenii tverdykh poleznykh iskopaemykh podzemnym sposobom. Moskva, 1959. 13 p. (Sbornik rekomenduemykh terminov, no.51) (MIRA 13:1)

1. Akademiya nauk SSSR. Komitet tekhnicheskoy terminologii.
2. Nauchnaya komissiya Komiteta tekhnicheskoy terminologii AN SSSR (for all except Shevyakov, Gus'kov).
(Mining engineering--Terminology)

EXCERPTA MEDICA Sec 15 Vol. 12/10 Chest Dis. Oct. 59

2143. ROENTGEN THERAPY OF BRONCHIAL ASTHMA IN CHILDREN (PRE-LIMINARY REPORT) (Russian text) - Ilyinsky P. I. and Rushimovich G. S. - VESTN. RENTG. I RADIOL. 1958, 33/3 (71-72)

In 57 children, as a treatment for bronchial asthma, the brain and inferior portions of the cervical bundles were irradiated with X-rays for 4 weeks. In two children recovery occurred, in 20 children remarkable improvement and in 18 children a moderate improvement; in 17 children there was no effect. Treatment was repeated where there had been negative results. In the same period an increase in haemoglobin and in the number of erythrocytes, with a transient and slight leucocytosis passing into leucopenia which receded in 10 days and a lymphopenia lasting for 3 months, was found. The use of antihistaminics before or at the end of the treatment is prescribed.

Sapiński - Ostrów Wlkp. (VII, 15, 19)

RUSHCHINSKIY, M. V.

A coal miner's manual. Moskva, Izdatel'stvo, 1952. 152 p. (Tekhnika bezopasnosti)
(58-23315)

1. Coal mines and mining - safety measures.
I. Rushchinskiy, M. V.

RUSHCHINSKIY, M. V.

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(55-2315)

TN205.I242

1. Coal mines and mining - Safety measures. I. Rushchinskii, M. V.

RUSHCHINSKIY, M.V., kandidat tekhnicheskikh nauk.

Discussion on the definition of the term "rock pressure." I. Manifestations of mine pressure. Ugol' 28 no.8:30-32 Ag '53. (MLBA 6:7)

1. VUGI.

(Mining engineering)

RUSHCHINSKIY, M.V.

Fuel Abst.

Vol. 15 No. 4

Apr. 1954

Natural Solid Fuels:

Winning

2711. ARTH SHOCKS IN KIZEL BASIN MINES.
(Coal), Oct. 1953, 11-14). (L).

(1)
Rushchinskii, M.V. (Ugol

RUSHCHINSKIY, M.V., kandidat tekhnicheskikh nauk.

Discussion on the definition of the term "rock pressure." I. Manifestations of mine pressure. Ugol' 28 no.8:30-32 Ag '53. (MLHA 6:7)

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(Mining engineering)

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Fuel Abstracts
Vol. XV, No. 2
Feb. 1954
Natural Solid
Fuels: Winning

97% DEFINITIONS OF "ROCK PRESSURE". I. MANIFESTATIONS OF ROCK PRESSURE. RUSHCHINSKIY, M.V. (Ugol (Coal), Aug. 1953, 30-32). Existing definitions of rock pressure are criticized. The term should be applied only to pressure due to gravity, manifestations of which are: the stresses in untouched rock and those resulting from mining, deformations, settlement, and pressures in supports, pillars and packing. The definition proposed is: "the mechanical effect produced by the weight of rocks both on the rocks themselves and on the walls, support and packing of natural and artificial cavities in them". (L).

RUSCHINSKIY, V. M.

RUSCHINSKIY, V. M.--"Investigation of the System of Automatic Regulation of the Type 67-SP Continuously Operating Coil Boiler." Acad Sci USSR. Inst of Automatics and Telemechanics. Moscow, 1955. (Dissertation for the Degree of Candidate in Technical Science).

SO Knizhanay letopis'
No 2, 1956

RUSHCHINSKIY, V.M., kandidat tekhnicheskikh nauk.

Experimental dynamic characteristics of controlled temperature
zones in the 67-SP once-through-type boiler. Teploenergetika
3 no.11:57-60 N '56. (MLRA 9:12)

1. Kontora po organizatsii i ratsionalizatsii rayonnykh
elektrostantsiy i seti.
(Boilers)

Ред. М. Г. Дудникова, А. М.
DUDNIKOV, Ye.G., redaktor; RUSHCHINSKIY, V.M., redaktor; OZERSKIY, V.A.,
redaktor; LARIONOV, G.Ye., tekhnicheskiy redaktor; MEDVEDEV, L.Ya.,
tekhnicheskiy redaktor

[Automation for thermal electric power plants. Translations]
Avtomatizatsiia teplovykh elektrostantsii. Perevody statei pod
red. Ye.G.Dudnikova i V.M.Rushchinskogo. Moskva, Gos.energ.izd-vo.
Pt. 1. [General problems of automation] Obshchie voprosy avtomati-
zatsii. 1957. 31 p. Pt.2. [Automation for boiler installations]
Avtomatizatsiia kotel'nykh ustanovok. 1957. 71 p. (MLBA 10:8)
(Electric power plants) (Automatic control)

RUSCHING

PHASE I BOOK EXPLOITATION 869

Avtomatizatsiya proizvodstvennykh protsessov (Automation of Production Processes) No. 2. Moscow, Izd-vo AN SSSR, 1958. 177 p. 6,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut avtomatiki i telemekhaniki.

Resp. Ed.: Lossiyevskiy, V.L., Doctor of Technical Sciences, Professor; Ed. of Publishing House: Klimov, V.A.; Tech. Ed.: Rylyina, Yu. V.

PURPOSE: This volume is intended for specialists engaged in research work and planning of automation process in various branches of industry.

COVERAGE: The volume contains articles summarizing the results of investigations carried out in laboratories for the automation of production processes of the Institut avtomatiki i telemekhaniki,

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AN SSSR (Institute for Automatics and Telemechanics of the USSR Academy of Sciences). The articles discuss the following topics: 1) basic objectives of automation 2) classification of industrial processes and formulation of typical automation solutions 3) experimental methods employed in studying industrial processes subject to regulation 4) considerations in determining the rational sequence and the extent of automation, and 5) results of studies on the automation of some industrial processes and establishments.

TABLE OF CONTENTS:

Foreword

3

GENERAL PROBLEMS OF AUTOMATION

Lossiyevskiy, V.L. Objectives of Automating Industrial Processes

7

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Automation of Production Processes

869

The study attempts to characterize the status of automation of production processes and to chart the more important directions for further development. There are no references.

Finkel'shteyn, S.M. Classification of Production Processes Subject to Automation and Typical Solutions of the Latter

19

The author reviews the classification of automated production processes with emphasis on continuous flows production which in terms of present instrumentation and outlook is most suitable for automation. There are 10 Soviet references.

Motulevich, D.Yu. and Tagayevskaya, A.A. Types of Controller Actions During Experimental Studies of Controlled Processes

43

Types of controller actions employed in studying industrial processes are reviewed, optimum conditions for the use of this or that controller action are indicated, shapes of curves for transition process and characteristics of stable conditions for single capacity plants are shown,

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Automation of Production Processes

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and spectra for a number of nonperiodic actions are presented. There are 2 appendixes and 6 Soviet references.

Rushchinskiy, V.M. Experimental Determination of Amplitude-phase Characteristics of Controlled Plants Based on a Transient Process With a Disturbance in a Form of a Rectangular Wave Impulse

65

Description of the method is presented. There are 10 Soviet references.

Rushchinskiy, V.M. Determining the Approximate Expression for Transfer Functions of the Controlled Plant Based on Its Experimental Frequency Characteristics

74

The author presents several solutions to the problem of lag detection. There are 4 Soviet references.

Lossiyevskiy, V.L. Determination of Rational Sequence and the Extent of Automation of Industrial Processes

83

This is an attempt to develop an analytical method which would permit the determination of production sectors most suitable for automation. The method consists basically of

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Automation of Production Processes

869

a review of production costs, analysis of material and labor expenditures, and subsequent introduction of automation on sectors where automation appears to be economically more effective than conventional methods of production. There are 1 Soviet, 1 Czech, and 1 American references.

AUTOMATION OF INDUSTRIAL PLANTS

Popovskiy, A.M., Gritskov, V.I., and Govorov, A.A. Automation of the Desiccating and Absorbing Departments of Plants Using the Contact Method of Producing Sulphuric Acid

97

The study describes fully the automation of the desiccating and absorbing department of the Shchelkovskiy khimicheskiy zavod (Shchelkovskiy Chemical Plant). The principal product of this department is monohydrate and the automation embraces the processes within the desiccating tower, and oleum and monohydrate absorbing columns. There are 19 Soviet references.

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Automation of Production Processes

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Gritskov, V.I. Investigation of a Cement Mill as an Object for Automation

133

Automation of a mill located in the vicinity of Novorossiysk consists largely of instrumentation and other means to assure the maintenance of acceptable quality of grist and liquid raw material mixture at a maximum productivity level. Description of instrumentation is included. There are 2 Soviet references.

Mezin, I.S. and Malyy, A.L. Automation of Drying Drums
The study presents basic concepts for the selection of a rational automation plan for a drying drum and describes its performance under normal production conditions. Reference is made to I.V. Vayser, Candidate of Technical Sciences, who participated in the work of the Institute for Automatics and Telemechanics of the USSR Academy of Sciences. There are 4 Soviet references.

139

Card 6/7

Automation of Production Processes

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Shumilovskiy, N.N. and Pliskin, L.G. Some Problems Encountered in the Development of an Automatic Control System for the Gasification Process in a Boiling Layer

153

The authors briefly described the technological process taking place in the boiling layer, the principal plan for automatic control, and characteristic features of the boiling layer. There are 1 Soviet, 2 German and 4 English references.

Pliskin, L.G. A System of Automatic Control of the Gasification Process in a Boiling Layer

164

The article describes the plan for a complex automatic control worked out in the Institute for Automatics and Telemechanics of the USSR Academy of Sciences with the participation of GIAP (State Institute of the Nitrogen Industry) and the Chirchik khimelektrokombinat MKhP SSSR (Chirchik Chemical-Electrical Combine of the Ministry of the Chemical Industry, USSR). There are 4 Soviet and 1 English references.

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JG/jmr
11-25-58

RUSHCHINSKIY, V.M.

Determination of an approximate expression for transfer functions of a controlled object on the basis of its experimental frequency characteristics. Avtom. proizv. prots. no.2:74-82 '58. (MIRA 13:8)
(Differential equations) (Automatic control)

RUSHCHINSKIY, V.M.

Experimental determination of amplitude-phase characteristics of controlled objects using a transient process with excitation in the form of a rectangular wave pulse. Avtom. proizv. prots. no.2:65-73 (MIRA 13:8) '58.

(Automatic control)

(Pulse techniques (Electronics))

RUSHCHINSKIY, V.M.

Determining the parameters of regulator tuning according to
expanded frequency characteristics of the regulated object
and the regulator. Priborostroyeniye no.12:5-7 D '61. (MIRA 14:12)
(Automatic control)

DEMENT'YEV, V.A., inzh.; FRENKEL', A.Ya., inzh.; RUSHCHINSKIY, V.M., kand.tekhn.
nauk

Study of the dynamics of a block consisting of a 67-2SP boiler and
K-50-90 turbogenerator. Teploenergetika 9 no.8:23-31 Ag '62.
(MIRA 15:7)

1. Tsentral'nyy nauchno-issledovatel'skiy institut kompleksnoy
avtomatizatsii.

(Boilers) (Turbogenerators)

RUSHCHINSKIY, V.M., kand.tekhn.nauk; DUEL', M.A., kand.tekhn.nauk;
DEMENT'YEV, V.A., inzh.; NECHAYEV, B.Ya., inzh.; HAYDA, V.A.,
inzh.; SHTEFAN, V.Ye., inzh.

Experimental system for the control of the 67-2SP boiler and
K-50-90 turbine block by means of a control computer.
Teploenergetika 9 no.10:32-35 0 '62. (MIRA 15:9)

1. TSentral'nyy nauchno-issledovatel'skiy institut kompleksnoy
avtomatizatsii i Khar'kovskoye upravleniye energokhozyaystva.
(Automatic control) (Electric power stations)

L 39107-66

ACC NR: AP6030379

SOURCE CODE: UR/0096/66/000/006/0008/0012

AUTHOR: Stefani, Ye. P. (Doctor of technical sciences); Dement'yev, V. A. (Candidate of technical sciences); Duel', M. A. (Candidate of technical sciences);
Rushchinskiy, V. M. (Candidate of technical sciences); Nechayev, B. Ya. (Engineer) ⁴⁴ ₈

ORG: TsNIIKA

TITLE: Some results of introduction of automatic control systems of the "Kompleks" type at electric power stations

SOURCE: Teploenergetika, no. 6, 1966, 8-12

TOPIC TAGS: thermoelectric power plant, computer control system, remote control system

ABSTRACT: A description is presented of the "Kompleks" automatic control system, designed for thermoelectric power station equipment; some of the results of introduction of the information portion of this system at two thermal electric power stations are presented. The system consists of the following main parts: the control computer system; the information system; the selective visual control system; the selective remote control system; the mnemonic circuits with signal elements, signal panel and individual measuring instruments for especially important parameters; the control panel. The first model of this system was installed at Heat and Electric Power Station TETs-21 in Moscow. The information portion of the system was used experimentally in 1964, and put into full use after some faults were corrected in 1965. It has been concluded since

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that the main equipment of the operator's point of the unit is convenient and efficient, and easy to use; the selective visual control systems and selective remote control systems allowed the elimination of a large number of control instruments, essentially reducing the size and complexity of the control panel-- the reliability of both systems is rated as rather high; although the reliability of the system as a whole could be improved, it suffices; the information input devices and recording devices do not meet the technical requirements placed on them for accuracy and reliability. Orig. art. has: 5 figures and 5 tables. [JPRS: 36,741]

SUB CODE: 13, 10 / SUBM DATE: none / ORIG REF: 005

Card 2/2/1128

RUSHCHITS, V.R.

RUSHCHITS, V.R., inzhener; YURKOV, S.S., inzhener.

Automatic production line for machining rope blocks. Stroil. i dor.
mashinostr. 2 no. 8:34-38 Ag '57. (MLRA 10:9)
(Machinery, Automatic)

MELOMED, V.I.; RUSHCHITS, V.R.; ZIMIN, N.K.

Semiautomatic sharpening and lapping of ceramic-metal cutting
tools. Stroii dor.mashinostr. no.11:31-34 N '56. (MLRA 9:12)
(Cutting tools)

MELAMED, V.I.; RUSHCHITS, V.R.

Germet nozzle for sand blast apparatus used in cleaning castings.
Stroi.i dor.mashinostr. no.1:30 Ja '57. (MLRA 10:2)
(Nozzles) (Sandblast)

1ST AND 2ND OPDS										PROCESSING AND PROGRESS MODEL										100 AND 4TH OPDS									
Method of accelerated tests of resistance of cements to salt waters. V. V. Kind. <i>Glasnostiprom</i>. N. K. T. P., N. S. S. R., Leningrad, Works of the Comm. of Pozzuolanic Administ., Pozzuolanic Cements 1936, 19-54; cf. C. A. 31, 44719. Methods of detg. the resistance of cements to the chem. action of mineral waters, of the nature of those to be encountered in the actual field conditions, by means of accelerated tests, are discussed. It is concluded that the use of highly concd. solns. is not correct as the disintegrating reactions may be different from field conditions and the order of resistance of different cements not the same as in practice. A better method is to use small-piece testing (Kuhl's methods), and to compare the small-scale strength of cements stored in solns. with those stored in H₂O. Significant results may be obtained in 3-6 months. Effect of dilute sulfate solutions on various cements. V. V. Kind. <i>Ibid.</i> 19-54. Tests on the influence of solns. (0.005% concn.) of CaSO₄, Na₂SO₄, MgSO₄, CaSO₄ + Na₂SO₄, CaSO₄ + MgSO₄, Na₂SO₄ + MgSO₄, and CaSO₄ + Na₂SO₄ + MgSO₄ on 2 portland cements, 3 pozzuolanic cements, and 1 slag cement immersed in them are described. All the solns. had the same effect on the individual cements. The portland cements disintegrated rapidly, but the other cements did not disintegrate, their hardening being better than that when immersed in H₂O. The comparative resistance of the cements in dil. solns. was the same as that in 10% aq. Na₂SO₄, but different from that in 10% aq. MgSO₄. The last soln. should not be used for producing accelerated results.															Design of concrete. [G. M. Rushchuk]. <i>Ibid.</i> 101-200; cf. C. A. 24, 3874; 27, 2351. Yefet's formula for the estn. of the strength of a concrete holds for plastic mixes of (A) pozzuolanic cement concretes as well as for (B) portland cement concretes. There are variations from the formula for dry or very wet mixes. The rate of strength development of A is less than that of B at early ages, but increases later. Thus at 28 days the strength of A is 37-47% of B, while at 1 year the difference is only 10-13%. This increase at long ages should be taken into account in design, to avoid uneconomical use of cement. Permeability of mortar and concrete made with various cements. S. D. Okorokov. <i>Ibid.</i> 201-22. For the production of an impermeable concrete it is recommended that pozzuolanic cements having a siliceous admixt. should be used. The aggregate should have round and smooth particles, gravel being better than crushed stone and natural sand better than artificial or angular sands. The aggregate should also be graded to conform with the grading detd. in the lab. as giving the best results, while the max. size of coarse aggregate should be the largest possible under the job conditions. A min. slump for the concrete, consistent with a proper workability, should be used; the concrete should be kept wet and at a temp. of 15-20° during curing. The latter conditions apply particularly to pozzuolanic concretes. Volume change (shrinkage) of concrete. P. I. Gluzhge. <i>Ibid.</i> 223-42. The shrinkage of pozzuolanic and slag														
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cements under damp and combined curing conditions is less than that of portland cements. Effect of hydraulic admixtures on the bond between mortar and steel. I. S. Kogan. *Ibid.* 243-78.—The abs. adhesive power decreases with increase in the percentage of admixt. The compressive strength of the cement also decreases and the ratio of the former to the latter, termed the "bond factor," remains const. for a given mortar. Bond factor values for pozzuolanic and blended cements may be either more or less than those for portland cements, but are never reduced enough to exceed a value which is considered safe. Pozzuolanic cements suitable for mortars and concretes are therefore also suitable for reinforced concrete. Effect of high temperature on various cements. G. M. Ruskhuk. *Ibid.* 279-314.—An investigation is described to det. whether the properties of pozzuolanic cements during heating up to 800° and subsequent rehydration compare favorably with portland cements from the viewpoint of the fire resistance of structures during heating, contraction curves during heating, curves of the heat of hydration after heating to different temps., and compressive-strength variation curves for varying heat and storage treatments were obtained. Pozzuolanic cements showed an absence of free Ca(OH)₂ in the heating curves, the greatest contraction on heating of any of the cements, the lowest heat of rehydration after heating to 800°, and less reduction in compressive strength after heating.

Pozzuolanic cements in mass concrete. V. N. Yung. *Ibid.* 315-32.—Mass concrete for hydraulic structures should be made of a low-heat cement combined with a high resistance to leaching of Ca(OH)₂ from the cement by the H₂O. Pozzuolanic cements are satisfactory for the latter requirement, while as regards the former they show less heat evolution at early ages than portland cements, but the heat evolution at later ages (28 days) of the 2 types is about the same. The reason for this is suggested as being due to the higher mixing-H₂O requirements of pozzuolanic cements; this leads to more complete hydration of the portland cement part of the mixed cement. A "hydrotechnical" cement for hydraulic structures is described, obtained by grinding together portland cement clinker (60-70 wt.-%), gypsum (2), dry diatomite (20-25) and quartz sand (10-15). Production of high-strength (rapid-hardening) pozzuolanic and slag portland cements. V. A. Kind, S. D. Okorokov and L. V. Frolov. *Ibid.* 333-341; cf. C. A. 29, 6388.—The rate of strength development of pozzuolanic and slag portland cements depends largely on the compn. and burning of the clinker used with the admixt. The most rapid-hardening qualities were obtained with clinkers having a high CaO-satn. factor, varying between 1.00 and 1.05, a high SiO₂ ratio [SiO₂/(Al₂O₃ + Fe₂O₃)] varying between 4.00 and 5.00, and a high Al₂O₃ ratio (Al₂O₃/Fe₂O₃) of not less than 2.45. The clinkers had also to be burned at a temp. for normal sintering. The percentage of added pozzuolana or slag in the rapid-hardening cements was the same as that for the ordinary type. Production of high-strength (rapid-hardening) pozzuolanic portland cement. S. M. Royak. *Ibid.* 367-78.—The normal slow rate of hardening of pozzuolanic portland cements can be increased by finer grinding, by increasing the CaSO₄·2H₂O (I) addn. to 3.3-3.5%, and by using a clinker having a high content of 3CaO·SiO₂. The increase

in the quantity of 1 probably retards the colloidation of the gel on the surface of the portland cement particles; this gives more time for reaction with the active SiO_2 of the pozzuolana. Under field conditions the use of $CaCl_2$ (3 wt.-%) in the mixing H_2O produces increased strength in the concrete. Hydraulic admixtures and pozzuolana portland cements (Karadag trass). S. I. Drushinin. <i>Ibid.</i> 305-406.—Data are given which show that the deposit of trass is uniform throughout. The optimum proportions of CaO and trass are 5:1 (wt.). Optimal proportioning of siliceous (hydraulic) admixtures and slaked lime. V. A. Kind and M. S. Kurotsapov. <i>Ibid.</i> 407-21.—Detns. of compressive and tensile strengths of CaO-pozzuolana mortars, with a variety of the latter, at testing ages up to 2 years have been made. The relative proportions of CaO and pozzuolana were also varied in each case; the optimum proportions varied with different pozzuolanas from 30% of pozzuolana: 20% of CaO to 40% 40%. Mixes based on diatomite showed a reduction in strength with age under air-curing. Pozzuolanas of low reactivity (e. g., volcanic ash, pumice) developed higher strengths at long ages than the others. Pozzuolanic cements with pumice and tuff. I. A. Aleksandrov. <i>Ibid.</i> 433-56.—Data on the reactivity and petrographic properties of pozzuolanas from the Trans-Caucasus are given, together with observations on the mortars from ancient structures in which these materials were used. Accelerated method for determination of the reactivity of siliceous (hydraulic) admixtures. I. D. Zaporozhets. <i>Ibid.</i> 475-8.—A method in which reactivity can be detd. within 5 hrs. is described and data are given comparing results by this method with those by the standard method. B. C. P. A.		20 Continued	
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84 GYPSUM-SLAG CEMENT. V. M. Lashovim, G. M. Rushchik, and N. N. Semenovskii (*Gipsosment*, No. 20, 1938). The properties of blast-furnace slags which determine their suitability as raw materials for gypsum-slag cements are described, and the setting mechanism of these cements is discussed. Tests were made on gypsum-slag, gypsum-slag-lime, and gypsum-slag-portland cement mixtures. Sections on the production and application of gypsum-slag cements, and tentative specifications, are included. (12 refs.)

ASH-SLA DETALLURGICAL LITERATURE CLASSIFICATION

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PROCESSING AND PROPERTY INDEX																									
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US. CONSTRUCTIONAL BINDING MATERIALS.---L. S. Kogan and G.I.M.--- Rushchuk. (Giprobtsment, No. 21, 1968). Comprises a review of materials which may replace portland cement in building construction: (a) "hydraulic admixtures," i.e. materials, which when mixed with lime form hydraulic cements, e.g. trass, pumice, tuft, volcanic ash, tripoli, diatomite; (b) lime-pozzolana cements; (c) "Glinite" cements ("Glinite" is kaolinitic clay which has been calcined at 600- 800°C., and which forms a cement on mixing with lime); (d) hydraulic lime; (e) ash from combustible schists; (f) waste materials from aluminium production ("schlamm"), to which 15-20% of portland cement, gypsum, etc., must be added. An account of the preparation and properties of these cements is given.																									
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1ST AND 2ND DEPT'S		PROCESSES AND PROPERTIES INDEX		3RD AND 4TH DEPT'S	
ca 20 Deformation of concrete from pozzolana-portland cements by shrinkage and swelling. G. M. Ruschchuk. <i>Vysokaya Nauch.-Issledovatel. Inst. Tsiment. V. N. I. Ts. Stroykh. Razb. No 10, 20-40; Chem. Zentr. 1940, I, 1730.</i> The manner and extent of the deformation of such concretes, when mixed and set under the same conditions, were found by expt. to depend to a large degree on the properties of the cements used. Comparison of only a few portland cements showed variations in the deformation of up to 40%. Hydraulic admixts. can either increase or reduce both shrinkage and swelling. No characteristic relationship between the deformation phenomena on the one hand and definite chem.-tech. or mineralogical properties of the cement clinker used or the hydraulic admixts. on the other could be established. There was no essential difference between the shrinkage or swelling of portland cement and that of pozzolana-portland cement. Increasing the amt. of either of the 2 cements from 225 to 375 kg. per cu. m. of concrete produced an av. increase in shrinkage of 40%. After normal storage at room temp. for 3 months the degree of deformation by swelling was 10-30% the shrinkage deformation. The degree of shrinkage or of swelling depends upon the temp. and degree of humidity of the atm. surrounding the concrete and also upon the age of the concrete, but no definite law showing this relationship has so far been established.					
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1ST AND 2ND CODES										3RD AND 4TH CODES									
PROCESSES AND PROPERTIES INDEX																			
New standard for physical and mechanical tests of cements. G. M. RUANCHUK. <i>Trudy Vsesoyuz. Nauchnoiss. iys. Zaved. Tsement. Prom.</i>, 3, 205-10 (1945). Details of the Russian Standard 310-41 for testing cements are given. This standard was approved in 1941, but because of the war adoption was delayed until 1945. B. Z. K.																			
ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION																			
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RUSHCHUK, G. M.

Rushchuk, G. M. - "Determining the rheological properties of cement in plastic consistency solutions," *Trudy I-go Vsesyuz. nauchnoissledovatel'skoy laboratorii tsementa, (concrete), Leningrad, 1948, p. 137-40.*

SC: U-2850, 16 June 53, (Letopis 'Zhurnal 'nykh Statey, No. 5, 1948).

RUSHCHUK, GNC

30043

Novykh myetodakh ispytaniya myekha nidhyeskikh svovstv tryemyenta. Trudy IV Vsesoyuz.
konf - tsii po byetonu i zhyelyezobeton. konstruktsiyam. Ch. Z. M.-L. 1949, s. 127-34

SC: LETOPIS' No. 34

CA

Selection of cements for hydrautechnical concrete for large size structures. L. S. Kogan and G. M. Kushchuk. *Tsement* 17, No. 2, 8-11(1951).--In the prepn. of cements for large structures, the mineralogical compn. of the clinker should be detd. by the chem. resistance requirements of the concrete. Under conditions of sulfate aggression the clinker should contain not over 8% of C_3A . Should this figure have to be exceeded, then the content of active hydraulic addns must be increased. For fresh waters belite type clinker is

preferable, provided its strength and cost are satisfactory, otherwise alite type clinker with an increased C_3S content should be used. Temp. increase properties are only slightly affected by the mineralogical compn. of the clinker. Strength requirements, if they are to be attained after more than 28 days, do not affect the mineralogical compn. The choice of hydraulic addns. depends on local availability of pozzolanic deposits or of industrial wastes. In their absence when clayey materials are to be used, the mineralogical compn. of the clinker should be detd. experimentally.

M. Huseh

RUSHCHUK, G.M., kandidat tekhnicheskikh nauk.

Toward the revision of standards for methods of physical and
mechanical testing of cements. TSement 17 no.6:13-18 N-D '51.
(MLRA 9:8)

(Cement--Testing)

KOGAN, L. S.; RUSHCHUK, G. M.

Cement Industries

Technical requirements for the manufacture of cement for the inner layers of the solid of dams on communism's great construction projects. TSement 18 No. 4, 1952.

9. Monthly List of Russian Accessions, Library of Congress, December 195~~2~~³, Uncl.
2

1. RUSHCHUK, G. M.
2. USSR (600)
4. Portland Cement - Standards
7. Portland cement standards of various countries. TSement 18 no.5, 1952

9. Monthly List of Russian Accessions, Library of Congress, January 1953. Unclassified.

RUSHCHUK, G.M.

KOGAN, L.S., kandidat tekhnicheskikh nauk; RUSHCHUK, G.M. kandidat tekhnicheskikh nauk.

Cements for precast reinforced concrete structures and parts.
ISement 20 no.6:3-7 N-D '54. (MIRA 8:3)

(Cement)(Precast concrete construction)

Rushchuk, G. M.

INT ✓ Effect of mineral composition of cement on frost resistance of mortar and concrete. G. M. Rushchuk. *Tsement* 21, No. 4, 14-19(1955).—No direct relation was found between frost resistance of concrete and mineral compn. of cement. B. Z. Kamich

RUSHCHUK, G.M., kandidat tekhnicheskikh nauk; SHTEYERT, N.P., kandidat tekhnicheskikh nauk.

Methods for a rapid determining of cement quality. Trudy GIPROTSEMENT
19:84-115 '56. (MIRA 10:4)

(Cement--Testing)

RUSHCHUK, G.M.

Transfer coefficients for converting various makes of cement
into equivalent tonnage. Trudy Giprotsement no.27:117-120 '63.
(MIRA 17:12)

RUSHCHUK, G. M.; SHTEYYERT, N. P.; YEGEREVA, Ye. G.

New standard for the physical and mechanical testing of cement.
Trudy Giprotsement no. 26:162-192 '63. (MIRA 17:5)

RUSHCHUK, G.M.; YEGEREVA, Ye.G.

Investigating the effectiveness of using experimental calculations
in designing concrete mixes with a given strength. Trudy
Giprotsement no. 21:84-97 '59. (MIRA 13:12)
(Concrete)

SOV/97-58-10-6/17

AUTHOR: Rushchuk, G.M., Candidate of Technical Sciences

TITLE: The Accuracy of Calculations of Strength of Concrete in Relation to Activity of Cement (O tochnosti raschetov prochnosti betona v zavisimosti ot aktivnosti tsementa)

PERIODICAL: Beton i zhelezobeton, 1958, Nr 10, pp 380-382 (USSR)

ABSTRACT: Studies by the present author entitled 'Calculation of strengths of concrete taking into account the new significance of the activity of cement', appeared in Trudy Giprotsementa, Nr 16, Promstroyizdat 1953. Experiments have been carried out on interdependence between the strength of the concrete, activity of cement and the cement/water ratio. Coefficients of correlation were worked out for the linear dependence between cement/water ratio, strength of concrete and activity of cement. The resulting values of these calculations are given in Table 1. On the basis of these values the following conclusions were drawn: (1) The degree of linearity between activity of cement and strength of concrete is much higher in those cases when activity of cement is measured in mixes of plastic consistency, which is apparent from comparison of coefficients of

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SOV/97-58-10-6/17

The Accuracy of Calculations of Strength of Concrete in Relation to Activity of Cement

correlation. (2) Calculated values of correlations differ by their coefficients from formulae which were accepted and recommended by the Fourth All-Soviet Conference on Concrete and Reinforced Concrete (1948) for calculation of the strength of concrete. (3) The mean deviation between experimentally obtained and mathematically calculated strength values for cement obtained from mortars of stiff consistency was twice as great as values for activity of cement obtained from mortars of a plastic consistency. Results of analogous tests were published by NIItsement (see B.G. Skramtayev, G.I. Gorchakov and A.M. Tarasenko: 'Clarification of the relationship of strength properties of cement and concrete', published in Informatsionnoye soobshcheniye NIItsementa Nr 16, 1953). Table 2 gives values obtained by NIItsement. Analysis of these values proves that when activity values of cement in mortars of plastic consistency are used, higher accuracy of calculation is obtained than when strengths of mortar of stiff consistency are used. The author came to the conclusion

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SOV/97-58-10-6/17

The Accuracy of Calculations of Strength of Concrete in Relation to Activity of Cement

that the existing formulae for calculating the strength of concrete should no longer be used. The mean deviations between experimentally obtained and calculated results, based on L.I. Panfilova's values, were found to be between 27 and 35%. In 1956 Professor B.G. Skramtayev, together with A.A. Budilov (Candidate of Technical Sciences), published results of investigations carried out in the Military Engineering Academy imeni V.V. Kuybyshev, which clarified the relationship of the strength of concrete, the activity of cement and the water/cement ratio (see 'Clarification of the Relationship of the strength of concrete, activity of cement, water/cement ratio and other factors', published in Vestnik Voennoinzhenernoy akademii imeni V.V. Kuybyshev, Nr 94, 1956). L.I. Panfilov, Candidate of Technical Sciences, published various experimental studies (Beton i zhelezobeton, 1956, Nr 2). Table 3 gives various formulae for calculating the strength of the concrete.

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SOV/97-58-10-6/17

The Accuracy of Calculations of Strength of Concrete in Relation
to Activity of Cement

There are 3 tables, no references.

Card 4/4

RUSHCHUK, G.M., kandidat tekhnicheskikh nauk.

On the relation between the strength characteristics and the dynamic
modulus of elasticity of cement mortars. TSement 23 no.2:18-24
Mr-Apr '57. (MIRA 10:7)

(Mortar--Testing)

CHUK, I. M. RUSHCHUK, I. M.

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Efficiency comparison of rhombic aeriels. Rush-

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CHUK, I. M. *Vestn. Elektroprom.*, 17 (No. 2) 11-18 (1946) *In Russian*.—The following rhombic aeriels are compared: single rhombic, parallel rhombics in a broadside array, and a Russian variant of the latter due to Aisenberg. Power gain and its relation to radiation resistance is discussed, this being calculated by Poynting's vector method. It is shown that the Aisenberg array presents a great saving in space compared with the usual broadside, (spacing between the major diagonals is reduced to 0.8 λ) and still has 1.8 $\times$ power gain compared with a single rhombic. Another system is described, consisting of 2 parallel rhombics vertically mounted and having a reduced radiation resistance of $<485 \Omega$. A combined system of such arrays reaches a power gain of 210, and is much simpler than the Telefunken array with 32 + 32 elements of similar performance. A. L.

← E. F. P.

SA

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RUSHCHINSKIY, V. M., ENG.

Furnaces

Plans for regulation air feed into boiler furnaces according to steam consumption.
Elek. sta., 23, No. 5, 1952.

9. Monthly List of Russian Accessions, Library of Congress, October 195³/₂, Uncl.

RUSHCHITS, A. S.

Kazakh Sci Res Vet Institute

"Ash-alkaline Solutions as Disinfecting Agents in Foot and Mouth Disease"

SOURCE: Veterinariya, Vol 20, Issue 10/11, pp 41-42, Oct/Nov 1943, Uncl
(Trans 141 by L. Lulich)

RUSHCHUK, I.M.										B 66 K 2441									
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Efficiency comparison of rhombic aerials. Rush-																			
CHAM, I. M. <i>Vestn. Elektrom.</i>, 17 (No. 2) 13-18 (1946) in Russian.—The following rhombic aerials are compared: single rhombic, parallel rhombics in a broadside array, and a Russian variant of the latter due to Ainsberg. Power gain and its relation to radiation resistance is discussed, this being calculated by Poynting's vector method. It is shown that the Ainsberg array presents a great saving in space compared with the usual broadside, (spacing between the major diagonals is reduced to 0.8λ) and still has 1.8 × power gain compared with a single rhombic. Another system is described, consisting of 2 parallel rhombics vertically mounted and having a reduced radiation resistance of <485 Ω. A combined system of such arrays reaches a power gain of 210, and is much simpler than the Telefunken array with 32 + 32 elements of similar performance. A. L.																			
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Antennas and Transmission Lines

26
A Tentative Investigation of a Complex System
of Tower Radiators for Radio Broadcasting.
B. V. Braude, I. M. Ruschuk & M. M. Pruzhanski.
Radiotekhnika, Moscow, July/Aug. 1947, Vol. 2,
No. 6, pp. 22-33. (In Russian.) In designing a
broadcasting system having four self-supporting
towers at the corners of a square, and intended for
both directional and non-directional broadcasting,
experiments were conducted with a model using
cross-lattice towers 250 cm high, erected on a ground
system of galvanized iron sheets. The radiators
are fed through single conductor feeders from two
250 cm oscillators covering a wavelength range from
110 to 150 cm. Measurements were made of the input
impedance of the radiators, of the phase velocity
of c.m. waves along them, and of the directivity
coefficient of the system for various operating
conditions. Experimental curves so obtained are
shown and the conclusions reached regarding the
operation of the proposed system are enumerated.

1948

RUSHCHUK, V I

AUTHOR: Rushchuk, V.I., Engineer

94-4-12/25

TITLE: The Installation and Operation of a Mercury-arc Rectifier Equipment with Leading Power Factor (Montazh i ekspluatatsiya rtutno-vypriyatel'noy ustanovki s operezhayushchim uglom sdviga faz)

PERIODICAL: Promyshlennaya Energetika, 1958, Vol.13, No.4, pp. 21 - 23 (USSR).

ABSTRACT: A mercury-arc rectifier set with leading power-factor based on the circuit proposed by the Kiev Polytechnical Institute (Kiyevskiy politekhnicheskiy institut) was installed at the Dneprovsk Aluminium Works in June, 1956. The set is intended to improve the power-factor of the mercury-arc rectifier supply to the electrolytic shop of the works. The theory of the equipment was given in an article by A.V. Orlovskiy, I.M. Chizhenko and A.S. Nemirovskiy, Promyshlennaya Energetika, 1956, No.4. The equipment is an adaptation of a standard set of 9 620 kVA intended to supply an aluminium electrolysis bath; the circuit is given in Fig.1. Not all the old equipment could be adapted and some parts had to be replaced or reconstructed. New components of the circuit are a three-phase equalising coil and a bank of capacitors.

Card1/3 The equipment uses the so-called cathode variant of the circuit

94-4-12/25

The Installation and Operation of a Mercury-arc Rectifier Equipment
with Leading Power Factor

which necessitates insulating individual rectifying valves from the frame and the vacuum system. General details of the reconstruction are given including busbar arrangements, instrumentation, protective devices, etc.

The set was commissioned in June, 1956, in parallel with two mercury-arc rectifier sets of the usual type with automatic control of current. The current of the experimental set was not regulated automatically. It has worked normally and without trouble, and by May, 1957, it had run for about 7 000 hours with a mean d.c. load of 7 600 A at 715 V. The power-factor is 0.965 leading, whilst on the remaining sets it is 0.86 lagging. As the load on the set is increased, so is the reactive power; it should be therefore loaded as fully as possible but because of defects in mercury-arc rectifiers, type PMHB-1000 x 6, the load was limited to 8 500 A and full advantage could not be taken of the new equipment. The defect is common in these rectifiers, which are very subject to back-firing. Operating experience showed that use of the circuit diminished the number of back-fires.

It is concluded that the circuit works well and should be widely introduced, as it makes very effective use of the capacitors and

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The Installation and Operation of a Mercury-arc Rectifier Equipment
with Leading Power Factor

reduces the number of back-fires. It corrects the power-factor with less increase in overall cost than is incurred with special power-factor correction equipment of the same output. Further work should, for example, include better design of the characteristics of equipment for use with the circuit, investigation of fault conditions in service and the design of standard sets. The Kiev Polytechnical Institute and the Works intend to investigate and test a 12-phase mercury-arc rectifier set to increase the coefficient of effectiveness to 7 - 8, which will greatly reduce the number of capacitors required. There is 1 figure.

ASSOCIATION: Dneprovskiy Aluminum Plant (Dneprovskiy alyuminiyevyy zavod)

AVAILABLE: Library of Congress
Card 3/3

L 33002-65 EWT(1)/EWT(m)/EWG(m)/EWP(b)/FSS-2/EWP(t) IJP(c) JD
ACCESSION NR: AF5001365 570286/65/000/004, 0026/0026

AUTHOR: Rushchuk, V. I.; Smerdov, I. A.; Yezerets, M. A.; Karnobatskiy, E. K.; Peller, V. V.; Shuriga, I. F. ²⁷

TITLE: A method for producing cupric silicate contact filler paste. Class 12,
No. 168292 ²⁷ ²⁷

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 4, 1965, 26

TOPIC TAGS: storage battery, filler paste, grid plug, silicate

ABSTRACT: This Author's Certificate introduces a method for producing cupric silicate contact filler paste by intensive cooling of the melt. The activity of the paste is improved by allowing the melt to flow over water-cooled rotating shafts, thus cooling it from 1650 to 852°C.

ASSOCIATION: none

SUBMITTED: 19Jul63

ENCL: 00

SUB CODE: EE, IC

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Cord 1/1

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137 AND 138 CERRI										PROCESS AND PROPERTIES INDEX										100 AND 101 CERRI									
BC 13 isofenchone. 1. isofenchone-, isofenchol-, and isofenchone-carboxylic acids. A.K. KUMAR-CHVA (J. Gen. Chem. Russ., 1937, 7, 1343-1351).— isofenchonecarboxylic acid is reduced electrolytically to yield a mixture of stereoisomeric hydroxy-acids, converted by HNO₃ into isofenchone, and by AcCl into a mixture of the acetate, m.p. 129.5-130.5°, of isofenchonecarboxylic acid, m.p. 134-135°, with its anhydride, and with a lactone (not isolated); this mixture yields isofenchonecarboxylic acid, m.p. 86-87°, when distilled at 120-100°/10 mm. R. T.										Common Elements OPEN MATERIALS INDEX Chemical Abstracts																			
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Distribution of ammonites in the Lower Permian of the Urals and the resulting stratigraphic conclusions. V. A. Maximova and V. E. Kuchentsov (U.S.S.R. Acad. Sci. U.S.S.R., 1910, 28, 100-103). An analysis of the distribution of ammonites in the Lower Permian strata of the Urals indicates that the boundary between the Carboniferous and the Permian should be drawn at the base of the Sakmarian.																			
ASH 16 A METALLOGICAL LITERATURE CLASSIFICATION																			

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